

PATENT COOPERATION TREATY

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**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY**
(Chapter II of the Patent Cooperation Treaty)
(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference CFO18122WO	FOR FURTHER ACTION See Form PCT/IPEA/416	
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International Patent Classification (IPC) or national classification and IPC Int.Cl. ⁷ G06F1/32, 3/12		
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1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 4 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:

a. ☒ a total of 16 sheets, as follows:

- ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
- ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☐ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 11.03.2005	Date of completion of this report 12.09.2005	
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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/006610

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-26 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____ as originally filed/furnished
- pages* _____ as amended (together with any statement) under Article 19
- pages* 27, 27/1, 28-34, 34/1, 35 _____ received by this Authority on 11.03.2005
- pages* 35/1, 36, 36/1, 37, 38 _____ received by this Authority on 11.03.2005
- ☒ the drawings:
- pages 1/19-19/19 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☒ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☒ the claims, Nos. 2, 3, 6, 7, 10, 11, 14, 15 _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/006610

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☒ the entire international application

☐ claims Nos. _____

because:

☐ the said international application, or the said claims Nos. _____

relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. _____ are so unclear that no meaningful opinion could be formed (*specify*):

Refer to Supplemental Box.

☐ the claims, or said claims Nos. _____ are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for said claims Nos. _____

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form



has not been furnished



does not comply with the standard

the computer readable form



has not been furnished



does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions in that the computer readable form:



has not been furnished



does not comply with the technical requirements

☐ See Supplemental Box for further details.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: No. III

The embodiment of the invention shown in figures 3 does not fall within the scope of the claims. This inconsistency between the claims and the description leads to doubt concerning the matter for which protection is sought, thereby rendering the claims unclear.

The term [based on] used in Claims 1, 13, 17 and 20 renders the definition of the subject matter of said claim unclear for the following reason: It does not have consistency in the portion in front of this term and the portion after this term.

The relative term [can be different from], used in claims 1, 5, 9, 13, 17, 18, 19 and 20 is vague and unclear, thereby rendering the definition of the subject-matter of said claims unclear.

The relative term [StandbyQuery instruction], used in claims 4, 8 and 16 is vague and unclear, thereby rendering the definition of the subject-matter of said claims unclear.

CLAIMS

1. (Amended) A peripheral device which can
communicate with a plurality of client devices
5 connected to a network, comprising:

notification means for notifying a proxy
response server connectable to the network of a sleep
mode transition request when the peripheral device
changes from a normal data processing wait status to
10 a sleep mode;

reception means receiving a sleep release
request from the proxy response server based on a
network packet indicating a peripheral device
discovery request for a peripheral device which is
15 changing to a predetermined sleep mode issued by any
client device connected to the network after the
proxy response server receives the sleep mode
transition request from the peripheral device; and

control means for releasing the sleep mode and
20 returning to a data processing wait status when said
reception means receives the sleep release request,

wherein the network packet which is the
peripheral device discovery request is a search
request packet for a predetermined multicast address
25 set as a predetermined network address for a
plurality of peripheral devices, and

wherein the multicast address for a peripheral

device discovery request in a sleep status can be
different from a multicast address of a peripheral
device discovery request in a normal status.

2. (Cancelled)

5 3. (Cancelled)

4. The peripheral device according to claim 1, wherein the search request packet includes a StandbyQuery instruction indicating a discovery request to a sleeping device.

5 5. (Amended) A server device proxy for a peripheral device which can communicate with a plurality of client devices connected to a network, comprising:

 registration means for receiving and
10 registering a sleep transition request announced from a peripheral device in the network when the peripheral device changes from a normal data processing wait status to a sleep mode;

 discovery means for retrieving a peripheral
15 device in a sleep status depending on a network packet indicating a specific peripheral device discovery request for discovery of a sleeping peripheral device issued from any client device connected to the network after registration by said
20 registration means; and

 notification means for notifying a sleeping

peripheral device whose sleep release request has been registered for release of a sleep mode to a peripheral device retrieved by said discovery means,

wherein the network packet which is the
5 peripheral device discovery request is a search request packet for a predetermined multicast address set as a predetermined network address for a plurality of peripheral devices, and

wherein the multicast address for a peripheral
10 device discovery request in a sleep status can be different from a multicast address of a peripheral device discovery request in a normal status.

6. (Cancelled)

7. (Cancelled)

15 8. The server device according to claim 5, wherein the search request packet includes a StandbyQuery instruction indicating a discovery request to a sleeping device.

9. (Amended) A client device which can
20 communicate with a plurality of peripheral devices or server devices connected over a network, comprising:

issue means for issuing a network packet
indicating a specific peripheral device discovery
request for discovery of a peripheral device during
25 transition to sleep status based on a response result

IPEA/JP 11.3.2005

from a network for a request to retrieve a peripheral device in a normal status;

reception means for receiving a return response from any peripheral device notified of a sleep
5 release request by said server device after the peripheral device discovery request has issued by said issue means; and

data processing means for transmitting a predetermined data processing request to a specific
10 peripheral device whose sleep mode has been released after said reception means has received the return response,

wherein the network packet which is the peripheral device discovery request is a search
15 request packet for a predetermined multicast address set as a predetermined network address for a plurality of peripheral devices, and

wherein the multicast address for a peripheral device discovery request in a sleep status can be
20 different from a multicast address of a peripheral device discovery request in a normal status.

10. (Cancelled)

11. (Cancelled)

12. (Amended) The client device according to
25 claim 9, wherein the search request packet includes a

StandbyQuery instruction indicating a discovery request to a sleeping device.

13. (Amended) A network device system in which a plurality of peripheral devices connected over a network can communicate with a plurality of client devices capable of recognizing a connection status of a peripheral device in a data processing wait status in the network,

wherein said peripheral device comprises:

10 notification means for notifying a proxy response server connectable to the network of a sleep mode transition request when the peripheral device changes from a normal data processing wait status to a sleep mode;

15 reception means receiving a sleep release request from the proxy response server based on a network packet indicating a peripheral device discovery request for a peripheral device which is changing to a predetermined sleep mode issued by any client device connected to the network after the proxy response server receives the sleep mode transition request from the peripheral device; and

20 control means for releasing the sleep mode and returning to a data processing wait status when said reception means receives the sleep release request,

wherein said proxy response server comprises:

IPEA/JP 11.3.2005

32

registration means for receiving and
registering a sleep transition request announced from
a peripheral device in the network when the
peripheral device changes from a normal data
5 processing wait status to a sleep mode;

discovery means for retrieving a
peripheral device in a sleep status depending on a
network packet indicating a specific peripheral
device discovery request for discovery of a sleeping
10 peripheral device issued from any client device
connected to the network after registration by said
registration means; and

notification means for notifying a
sleeping peripheral device whose sleep release
15 request has been registered for release of a sleep
mode to a peripheral device retrieved by said
discovery means,

and wherein said client device comprises:

issue means for issuing a network packet
20 indicating a specific peripheral device discovery
request for discovery of a peripheral device during
transition to sleep status based on a response result
from a network for a request to retrieve a peripheral
device in a normal status;

25 reception means for receiving a return
response from any peripheral device notified of a
sleep release request by said server device after the

peripheral device discovery request has issued by
said issue means; and

data processing means for transmitting a
predetermined data processing request to a specific
5 peripheral device whose sleep mode has been released
after said reception means has received the return
response,

wherein the network packet which is the
peripheral device discovery request is a search
10 request packet for a predetermined multicast address
set as a predetermined network address for a
plurality of peripheral devices, and

wherein the multicast address for a peripheral
device discovery request in a sleep status can be
15 different from a multicast address of a peripheral
device discovery request in a normal status.

14. (Cancelled)

15. (Cancelled)

16. (Amended) The network device system
20 according to claim 13, wherein the search request
packet includes a StandbyQuery instruction indicating
a discovery request to a sleeping device.

17. (Amended) A device retrieving method for
use with a peripheral device which can communicate

with a plurality of client devices connected to a network, comprising:

a notifying step of notifying a proxy response server connectable to the network of a sleep mode transition request when the peripheral device changes
5 from a normal data processing wait status to a sleep mode;

a receiving step of receiving a sleep release request from the proxy response server based on a
10 network packet indicating a restriction means for a peripheral device which is changing to a predetermined sleep mode issued by any client device connected to the network after the proxy response server receives the sleep mode transition request
15 from the peripheral device; and

control step of releasing the sleep mode and returning to a data processing wait status when said receiving step receives the sleep release request,

wherein the network packet which is the
20 peripheral device discovery request is a search request packet for a predetermined multicast address set as a predetermined network address for a plurality of peripheral devices, and

wherein the multicast address for a peripheral
25 device discovery request in a sleep status can be different from a multicast address of a peripheral device discovery request in a normal status.

18. (Amended) A device retrieving method for use with a server device proxy for a peripheral device which can communicate with a plurality of client devices connected to a network, comprising:
- 5 a registration step of receiving and registering a network packet indicating a sleep transition request announced from a peripheral device in the network when the peripheral device changes from a normal data processing wait status to a sleep

mode;

a retrieving step of retrieving a peripheral device in a sleep status depending on a network packet indicating a specific peripheral device
5 discovery request for discovery of a sleeping peripheral device issued from any client device connected to the network after registration in said registering step; and

a notifying step of notifying a sleeping
10 peripheral device whose sleep release request has been registered for release of a sleep mode to a peripheral device retrieved in said retrieving step, wherein the network packet which is the peripheral device discovery request is a search
15 request packet for a predetermined multicast address set as a predetermined network address for a plurality of peripheral devices, and

wherein the multicast address for a peripheral device discovery request in a sleep status can be
20 different from a multicast address of a peripheral device discovery request in a normal status.

19. (Amended) A device retrieving method for use with client device which can communicate with a plurality of peripheral devices or server devices
25 connected over a network, comprising:

a issuing step of issuing a network packet indicating a specific peripheral device discovery

request for discovery of a peripheral device during transition to sleep status based on a response result from a network for a request to retrieve a peripheral device in a normal status;

- 5 a receiving step of receiving a return response from any peripheral device notified of a sleep release request by said server device after the peripheral device discovery request has issued in said issuing step; and

a data processing step of transmitting a
predetermined data processing request to a specific
peripheral device whose sleep mode has been released
after said receiving step has received the return
5 response,

wherein the network packet which is the
peripheral device discovery request is a search
request packet for a predetermined multicast address
set as a predetermined network address for a
10 plurality of peripheral devices, and

wherein the multicast address for a peripheral
device discovery request in a sleep status can be
different from a multicast address of a peripheral
device discovery request in a normal status.

15 20. (Amended) A device retrieving method for
use with a network device system in which a plurality
of peripheral devices connected over a network can
communicate with a plurality of client devices
capable of recognizing a connection status of a
20 peripheral device in a data processing wait status in
the network,

wherein in said peripheral device, said method
comprises:

a notifying step of notifying a proxy
25 response server connectable to the network of a
network packet indicating a sleep mode transition
request when the peripheral device changes from a

normal data processing wait status to a sleep mode;

a receiving step of receiving a sleep
release request from the proxy response server based
on a peripheral device discovery request for a
5 peripheral device which is changing to a
predetermined sleep mode issued by any client device
connected to the network after the proxy response
server receives the sleep mode transition request
from the peripheral device; and

a control step of releasing the sleep mode and returning to a data processing wait status when said receiving step receives the sleep release request,

5 wherein in said proxy response server, said method comprises:

 a registering step of receiving and registering a sleep transition request announced from a peripheral device in the network when the
10 peripheral device changes from a normal data processing wait status to a sleep mode;

 a retrieving step of retrieving a peripheral device in a sleep status depending on a network packet indicating a specific peripheral
15 device discovery request for discovery of a sleeping peripheral device issued from any client device connected to the network after registration in said registering step; and

 a notifying step of notifying a sleeping
20 peripheral device whose sleep release request has been registered for release of a sleep mode to a peripheral device retrieved in said retrieving step,

 and wherein in said client device, said method comprises:

25 an issuing step of issuing a network packet indicating a specific peripheral device discovery request for discovery of a peripheral

device during transition to sleep status based on a response result from a network for a request to retrieve a peripheral device in a normal status;

a receiving step of receiving a return
5 response from any peripheral device notified of a sleep release request by said server device after the peripheral device discovery request has issued in said issuing step; and

a data processing step of transmitting a
10 predetermined data processing request to a specific peripheral device whose sleep mode has been released after said reception means has received the return response,

wherein the network packet which is the
15 peripheral device discovery request is a search request packet for a predetermined multicast address set as a predetermined network address for a plurality of peripheral devices, and

wherein the multicast address for a peripheral
20 device discovery request in a sleep status can be different from a multicast address of a peripheral device discovery request in a normal status.

21. The peripheral device
according to claim 1, wherein said sleep mode refers
25 to a mode to which power is not supplied to a status management unit of a printer controller from which a LAN controller can receive a status.